DOCUMENT RESUME

ED 037 390 SP 003 605

AUTHOR Reed, Cheryl L.; And Others
TITLE The Effect of Microteaching, Directive, and Non-Directive Lectures on Achievement and Attitudes in a Basic Educational Psychology Course.
PUB DATE 70
NOTE 12p.; Paper presented at the annual meeting of the American Educational Research Association, Minneapolis, March 1970

EDRS PRICE EDRS Price MF-$0.25 HC-$0.70
DESCRIPTORS Educational Psychology, Education Majors, *Lecture, *Microteaching, *Preservice Education, *Teacher Attitudes, *Teaching Skills

ABSTRACT

A study of three teaching methods used in an educational psychology course was designed to observe the effects of each method and each combination of methods on the students' teaching skill and attitude toward educational psychology and microteaching. Three methods were manipulated: lectures on general technical skills related to teaching (Directive Lectures, DL), lectures on interpersonal relationships (Non-directive Lectures, NDL), and participation in multiple microteaching sessions (MT). All combinations of the three were used in a 2 x 2 x 2 factoral design. Subjects were 87 undergraduates enrolled in an educational psychology class randomly split into eight experimental treatments. Data was collected from student responses to a 56-item course evaluation form and from peer evaluations of each subject's teaching skill in the final MT session using the Stanford Teacher Competence Appraisal Guide (STCAG). A three-way analysis of variance was used. Major findings: The MT and DL treatments were each effective in improving teaching skills while the NDL treatment did not affect skills. Attitudes were more favorable as a result of each of the lecture methods, less favorable as a result of the MT. The best treatment for both good teaching skills and positive attitude appears to be a combination of one MT experience with DL. However, a combination of all three methods is most likely to produce positive attitudes toward the course. (JS)

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

ED037390

THE EFFECT OF MICROTEACHING, DIRECTIVE, AND NON-DIRECTIVE LECTURES ON ACHIEVEMENT AND ATTITUDES IN A BASIC EDUCATIONAL PSYCHOLOGY COURSE[1]

Cheryl L. Reed, Adrian P. Van Mondfrans, and Thomas M. Smith

Purdue University

Microteaching as a technique of teacher training was first implemented in 1963. The focus within the microteaching model has been almost exclusively on general technical skills related to teaching such as reinforcement, set induction, closure, etc. (Allen and Ryan, 1969). Training in other areas such as interpersonal relations may be facilitated by the microteaching model (cf. Ivey, 1968).

The purpose of the present study was to assess the effects of focusing on general technical skills versus interpersonal relationship skills in conjunction with microteaching. The authors were especially interested in the effects on performance and attitudes of prospective teachers in an educational psychology course.

Three basic factors were manipulated in the study: lectures on general technical skills related to teaching (Directive Lectures, DL), lectures on interpersonal relationships (Non-directive Lectures, NDL), and participation in multiple microteaching sessions (MT). All possible combinations of these three factors were utilized in a 2 x 2 x 2 factorial design. The basic questions asked were: (1) What is the effect on subjects' teaching skill and attitudes toward educational psychology and micro-teaching? and (2) What is the effect on subjects' teaching skill and attitudes toward educational psychology and microteaching of combining two or more of the factors?

1. A paper presented at the annual meeting of the American Educational Research Association, Minneapolis, March, 1970.

SP003605

Method

Subjects. Subjects were 87 undergraduate students enrolled in a basic educational psychology course during the spring semester, 1969. The class was randomly split into eight experimental groups receiving the treatments indicated in Table I.

Procedures. During the fall semester, 1968, a pilot study was conducted. From the information and experience gained during the fall, the following procedures were decided upon. All subjects met twice a week for instruction. The eight experimental groups met separately once a week. During these separate meetings the treatments were administered. At the end of the experiment all subjects participated in one microteaching session in which their terminal teaching skills were assessed.

The microteaching treatment (MT) consisted of five microteaching training sessions. The microteaching session involved presenting a five to ten minute lesson, viewing a videotape of the performance, and re-teaching the lesson.

In addition to MT training two other kinds of training procedures were used - directive and non-directive lectures. The directive lecture (DL) treatment consisted of five lectures in which specific teaching skills were taught. These skills included reinforcement, varying the stimulus, set induction, closure, lecturing, and the use of audio-visual materials. Subjects participating in both MT and DL were instructed to implement the skills described in the DL in their MT sessions. Subjects who did not microteach in conjunction with the DL met in small groups and discussed methods of implementing the skills.

The non-directive lecture (NDL) treatment consisted of five lectures on the effects of various teacher characteristics and student characteristics in learning situations. Subjects who received both NDL and MT treatments were instructed to implement the skills described in the NDL in their MT session(s). Subjects who did not microteach in conjunction with NDL also met in small groups and discussed methods of implementing the skills.

When a group was not participating in one of the three treatments (MT, DL, or NDL) they met with an instructor to discuss class material.

Instruments. Data for analysis were drawn from two sources: (a) student responses to a 56 item course evaluation form[1], and (b) peer evaluations of each subject's teaching skill in the final MT session using the Stanford Teacher Competence Appraisal Guide (STCAG, available from Stanford University).

The course evaluation form included thirty items specifically related to the MT situation, ten items involving the entire class lectures, eleven items related to the small group activity, and five items involving the overall course experience.

The STCAG consists of thirteen items to evaluate specific teaching skills. These include two items on the aims of the lesson, three items on lesson organization, six items involving teacher-student relationships, and two items involving evaluation procedures.

Analysis. All items of the course evaluation and the STCAG were analyzed separately using the approximate method of unweighted means in a three-way analysis of variance with unequal cell size as described in

---

1. Copies available upon request from the first author.

Bancroft (1968, p. 66). An alpha level of .05 was used to test the significance of the resulting F-ratios.

Results

ANOVA tables and means are available from the first author upon request. The findings significant at the .05 level or beyond are presented here in summary form. First, the main effects of each factor (MT, DL, or NDL) are described. Secondly, the effects of combinations of these factors are described.

The main effects of MT, DL and NDL factors on performance. With respect to ratings of the subjects' teaching skill using the STCAG, when the four experimental groups receiving the MT treatment (the MT groups) were compared with the four experimental groups not receiving the MT treatment, there were significant differences on four of the thirteen items. The MT groups were rated higher on the three items related to ending the lesson and evaluation techniques. The four groups which did not receive the MT treatment were rated higher on gaining the initial attention of the students.

When ratings of subjects' teaching skill were compared for the four groups receiving the DL treatment versus the four groups not receiving the DL treatment there were significant differences on twelve of the thirteen items. The DL groups were rated higher on all twelve of these items. The DL groups also scored higher on the thirteenth variable although the difference was not significant.

There were no significant differences in teaching skill between the groups receiving the NDL treatment and the groups not receiving NDL.

The main effects of the MT, DL and NDL factors on attitudes. On the course evaluation instrument the subjects who did not receive the MT treatment evaluated nine of 56 items higher than the MT treatment groups. The items involved the following aspects of the course: the amount learned and the motivating value of the DL and/or the NDL they received; the motivating value of acting as an audience in the MT session; the percent of the overall course material learned in the experimental sessions in general and with particular value to future teachers; preparation for class exams and assignments; and willingness to participate again. The subjects not receiving the MT treatment also felt they spent less time on work related to the experimental session.

Subjects receiving the DL treatment gave higher ratings than the subjects not receiving DL on seven of 56 items of the course evaluation instrument. These items were: the amount learned from TV tapes; the motivational value of the class lectures; the motivational value of the DL; the amount learned and the usefulness in assessing self as a prospective teacher; and the value for future teachers of the overall course experience.

The NDL subjects gave higher ratings than the subjects not receiving the NDL treatment on nine of 56 items, while the opposite was true on one of 56 items. The NDL subjects rated the following aspects of the course higher: the value of the MT lesson for future teachers; amount learned from the MT preparation; usefulness of the MT experience in assessing self as a teacher; the motivating value of acting as the audience for others in the MT session; the value of the overall course for future teachers; amount learned from the course; and the usefulness in assessing self as

a teacher of the overall course. The NDL subjects rated the amount learned viewing the videotape of their MT lesson(s) lower than subjects not receiving NDL treatment.

Interaction of MT, DL and NDL on performance. The interaction of MT and DL factors yielded significant F-ratios for four of thirteen teaching skill items. The four items dealt with the aims and planning of the MT lesson. On all four items groups receiving both the MT and DL treatments were rated highest, groups receiving DL but not MT next highest, and those receiving MT but not DL lowest.

The interactions of the MT and NDL factors yielded significant F-ratios on two of thirteen teaching items skills. These items dealt with being sensitive to students' abilities and directing students' attention to the learning tasks. For both of these items the subjects receiving the NDL treatment but not the MT treatment were rated highest, the subjects receiving MT but not NDL next highest, and the subjects receiving both MT and NDL lowest.

The interaction of DL and NDL resulted in no significant F-ratios.

Interaction of MT, DL and NDL on attitudes. There were only eight significant F-ratios of the 168 possible two-way interactions involving MT, DL, and NDL on the course evaluation instrument. Since this number would be expected by change, these data will not be presented.

The MT by DL by NDL interaction on performance. The three-way interactions of MT, DL AND NDL yielded significant F-ratios for four of thirteen items on the STCAG. The four items concerned the subjects' ability to direct students' attention to the learning tasks, to gear the pace of the lesson to students' ability, to have a harmonious relationship with students,

and to evaluate students adequately. On all four items the subjects receiving the MT treatment only were rated highest, the subjects receiving MT and NDL were rated next highest and subjects receiving DL or both DL and NDL were rated third highest. Subjects receiving NDL only were rated lowest with subjects receiving both MT and DL next to lowest. The subjects receiving MT, DL and NDL were rated third lowest.

The MT by DL by NDL interaction on attitudes. The three-way interaction of MT, DL and NDL yielded significant F-ratios for 28 of the 56 items on the course evaluation instrument. General patterns will be discussed below. Twenty-two out of the thirty items dealing with the MT session resulted in significant differences between groups. In general, the subjects receiving all three treatments rated these variables highest; the subjects with just NDL treatment rated second highest; the subjects with just the MT treatment rated third highest; the subjects with DL treatment fourth highest; subjects with both DL and NDL rated fifth highest; and subjects with both MT and DL treatments rated sixth. The subjects receiving no treatments rated MT items lowest while subjects receiving MT and NDL treatments rated these items second from the lowest.

Three of the five items on overall course experience resulted in significant F-ratios. The subjects having only the NDL treatment rated the course highest; the subjects with all three treatments rated the course second highest; the subjects with only DL treatment rated the course third highest. The overall course experience items were rated lowest by subjects receiving none of the treatments and second from the lowest by subjects who received only the MT treatment. The subjects receiving some combination of two treatments rated the overall experience in the middle of the other subjects.

Two of the eleven items dealing with the small group activities resulted in significant differences between groups. In general, the subjects receiving only NDL treatment rated the items highest while the subjects participating in MT and NDL treatments but not the DL treatment rated the items lowest. The subjects receiving just DL, DL and NDL but not MT, and the subjects receiving all three rated the items second. The subjects with just MT rated the items fifth. Subjects receiving no treatments or receiving MT and DL rated the overall course second from the lowest.

There was only one item out of ten possible items about the class lectures which resulted in a significant F-ratio. On this variable—the helpfulness of TV lectures in preparing for exams—the subjects receiving all three treatments rated it highest, the subjects receiving one of the three rated second highest, while the subjects receiving no treatment or a combination of two treatments rated it lowest.

Discussion and Conclusions

Students who participated in the microteaching training sessions showed greater teaching skill than students who did not participate. However, the students' attitudes about certain aspects of the course were less favorable if they had received the microteaching treatment. Those aspects centered around the small group experience. Students felt that microteaching took a great deal of time. One might hypothesize that the subjects felt overburdened since so much more of their time was consumed in preparing for the five microteaching training sessions. Thus, they had less time to devote to other course activities.

The directive lectures, like the microteaching treatment, were also found to be effective in improving students' teaching skills. In addition, students who received the directive lectures had a more positive attitude toward the course than students who did not have the directive lecture treatment. Perhaps this is because there were more specific indicators of purposes and activities which gave the student assurance of what was expected of him.

Students' attitudes toward the course were also higher when they had received the non-directive lecture treatment than when they had not. The non-directive lectures, however, did not affect teaching skills.

The addition of the non-directive lectures to the microteaching training diminished the effectiveness of the microteaching in terms of students' teaching skills. It may be that the non-directive lectures focused the students' attention on skills which were not successfully assessed. In general, attitude scores about the course were also lower when treatments were presented in pairs rather than separately. Students with two treatments may have felt that the treatments were not sufficiently relevant to course exams and assignments to justify the time required for the treatments. Interestingly, students who received all three treatments gave extremely favorable evaluations of the course. It may have been that, since these subjects had not participated in any of the discussion sessions (where course assignments and material covered by exams were discussed), they were not aware of other activities that might have been conducted. Even though these subjects had positive attitudes about the course, their performance of teaching skills was poorer than students in half the other groups.

Van Mondfrans et al. have shown that engaging in microteaching can improve students' attitudes toward an educational psychology course. From past research and these conclusions two optimum sets of experiences for students in this educational psychology course may be suggested. If both good teaching skills (as assessed at the end of the course) and positive attitudes toward the course are desired, the best treatment would be a combination of one microteaching experience with directive lectures. However, if the desired outcome is positive attitude toward the course, the provision of microteaching, directive lectures, and non-directive lectures would be optimal.

Table I

Treatments	Microteaching	Directive Lecture	Non-directive Lecture
Group A	X *	X	X
B	X	X	O
C	X	O	X
D	X	O	O
E	O	X	X
F	O	X	O
G	O	O	X
H	O	O	O

* An X underneath each treatment indicates the presence of the treatment for that group. O indicates the absence of the treatment for that group. Group A thus received all three treatment conditions.

References

Allen, D., and Ryan K. Microteaching. Reading, Mass.: Addison-Wesley, 1969.

Bancroft, T. A. Topics in Intermediate Statistical Methods, Volume I. Ames, Iowa: The Iowa State University Press, 1968.

Ivey, A. E. "Micro-counseling and attending behavior, an approach to prepracticum coursetraining." Bibliog. Journal of Counselor Psychology Monograph Supplement, 15, 1968, 1 - 12.

Van Mondfrans, A. P., Smith, T. M., Feldhusen, J. F., and Stafford, C. W. "Student Attitudes and Achievement in an Educational Psychology Course After Microteaching." A paper presented at the annual meeting of the American Educational Research Association, February, 1969.